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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/120,664 07/22/98 GAVIN D 101792-100

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DALE LYNN CARLSON
WIGGIN & DANA
ONE CENTURY TOWER
NEW HAVEN CT 06508-1832

EXAMINER

CELSA, B

ART UNIT

PAPER NUMBER

1627

DATE MAILED:

03/03/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

file copy

Office Action Summary

Application No.

09/120,664

Applicant(s)

Gavin et al.

Examiner

Bennett Celsa

Group Art Unit

1627

☒ Responsive to communication(s) filed on Dec 14, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1, 38, 40, and 41 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 38, 40, and 41 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 8

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Response to Amendment

Applicant's amendment dated 12/14/99 in paper no. 7 is acknowledged.

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Status of the Claims

Claims 1, 38 and 40-41 are pending and under consideration..

Claims 1 and 38 are under consideration.

Claims 40-41 are under consideration (with regard to prior art) only to the extent that they encompass the elected invention (e.g. zinc pyrithione).

Outstanding Objection(s) and/or Rejection(s)

2. Claims 1, 38 and 40-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Bernstein et al., U.S. Pat. No. 2,809,971 (10/57).

Bernstein et al. disclose the formation of a biocidal composition comprising particles (e.g. precipitates) of Zn pyridinethione chelate complexes (e.g. see Examples 16, 19 and 22:col. 7 and 8) which can be added directly to the soil (e.g. sprinkled: see col. 10). The particle complex which possesses ingredients within the scope of the presently claimed would inherently possess the same physical parameters e.g. core and shell.

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Discussion

Applicant's arguments directed to the above anticipation rejection over the Bernstein et al. Reference were considered but deemed nonpersuasive for the following reasons.

Applicant argues that Bernstein et al fails to disclose "the instant composite particles". However, the Bernstein examples disclose a biocidal composition which contains the same components (e.g. a pyrithione adduct and a zinc salt) as presently claimed. Further the reference teaches precipitates of these components which presumably comprise particles. Further, the reference teaches the reaction product of zinc and a pyrithione adduct which is also clearly within the scope of the present claim 1. Thus the composition and structure of claim 1 appears to be met by the various reference examples.

Applicant's argument regarding the col. 10 disclosure is not responsive to the rejection which addresses the compounds of Examples 16, 19 and 22 and the disclosure of col. 7 and 8.

Accordingly, this rejection is hereby maintained.

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3. Claims 1, 38, 40 and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Oppong et al., U.S. Pat. No. 5,776,960 (7/98: filed 10/96) and Bernstein et al. U.S. Pat. 2,809,971 which is incorporated by reference by the '960 patent (see '960 patent at col. 2, lines 6-15).

Oppong et al disclose synergistic biocidal compositions which comprise dry or tablet formulation (e.g. particles) of an ionene polymer and a metal salt, such as Zn pyridinethione chelate complexes as described in Bernstein et al. (See Examples 16, 19 and 22). The particle complex which possesses ingredients within the scope of the presently claimed would inherently possess the same physical parameters e.g. core and shell.

Discussion

Applicant's argument directed to the above anticipation rejection over the Oppong et al. Reference in view of Bernstein was considered but deemed nonpersuasive.

Applicant argues that the combination of ionene polymers and pyrrithione salts are "physical mixtures" not composite particles wherein the shell comprises the reaction product of pyrrithione with a portion of the core. The Examiner respectfully disagrees.

As discussed above, the Bernstein examples disclose a biocidal composition which contains the same components (e.g. a pyrrithione adduct and a zinc salt) as presently claimed. Further the Bernstein reference teaches precipitates of these components which presumably comprise particles. Further, the reference teaches the reaction product of zinc and a pyrrithione adduct which is also clearly within the scope of the present claim 1. Thus the composition and

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structure of claim 1 appears to be met by the various reference examples. Additionally incorporation of the ionone polymers is within the scope of the presently claimed invention which is open ended (e.g. composition comprising). Further the pressing together of the ionene polymer and the Bernstein zinc pyrithione salts is well within the scope of "composite particles" as presently claimed (e.g. a tablet is composed of composite particles of zinc pyrithione salts and ionene polymer).

Accordingly, this rejection is hereby retained.

4. Claims 1, 38 and 40-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Roenigk, U.S. Pat. No. 5,821,271 (10/98: filed 12/92)..

Roenigk disclose a biocidal dispersible (e.g. powder) composition (e.g. see col. 2, lines 40-46) comprising a chitosan zinc pyrithione complex (e.g. see col. 7, lines 6-32 and Table IV). The particle complex which possesses ingredients within the scope of the presently claimed would inherently possess the same physical parameters e.g. core and shell.

Discussion

Applicant's arguments directed to the above anticipation rejection over the Roenigk patent reference were considered but not deemed persuasive for the following reasons.

Applicant argues that the "chitosan-zinc-pyrithione complex" does not disclose or suggest "composite particles as instantly claimed". The Examiner respectfully disagrees.

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The patent reference composition is clearly biocidal. The reference discloses ingredients e.g. zinc and pyrithione, which clearly form a "reaction product" (e.g. zinc pyrithione) within the scope of the presently claimed invention. The presently claimed composition is open (e.g. comprising language) to additional ingredients which would include chitosan. The complex of zinc pyrithione chitosan is within the scope of "a composite"; and the reference further teaches that the complex as either a precipitate or cake which clearly would comprise "particles" within the scope of the claimed invention. The particle complex which possesses ingredients within the scope of the presently claimed would inherently possess the same physical parameters e.g. core and shell.

Accordingly, this rejection is hereby retained.

5. Claims 1, 38, 40 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by the Abstract to Nagata et al. JP 04-311206 (10/92).

Nagata et al. disclose a filter medium containing biocidal composition of particles comprising a zinc oxide core and shell of zinc pyrithion (and/or zinc undecylecin acid). The disclosed particulate biocidal composition clearly anticipates the presently claimed composite particles.

Discussion

Applicant's arguments directed to the above Nagata et al. Reference were considered but deemed nonpersuasive for the following reasons.

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Applicant argues that Nagata et al. Discloses "physical mixtures" and not "composite particles" as presently claimed. The Examiner respectfully disagrees.

The Nagata et al. reference clearly teaches a "biocidal composition" (attached to a filter) which comprises a core and a surface layer each of which contains components (e.g. zinc in core as a zinc oxide; and surface layer of pyrithione) clearly within the scope of the presently claimed invention. The reference composition clearly "comprises composite particles" of zinc oxide; which is also within the presently claimed scope. Additionally, zinc pyrithione clearly encompasses the presently claimed "reaction product"

The Examiner is unclear as to the distinction applicant is making between "physical mixtures" and "composite particles"; but in any event upon mixing the above reference components a "composite" within the presently claimed scope would surely result

Assuming the relevancy of applicant's distinction between a "physical mixture" and a "composite particle" ; it is noted that the Examiner lacks facilities to make a comparison between the prior art product and any specifically disclosed embodiment.

In any event the Examiner believes that the Nagata et al. reference clearly anticipates the presently claimed composition. The Examiner further believes that applicant's purported distinction between "physical mixtures" and "composite particles" is meritless.

Accordingly this rejection is hereby maintained.

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6. Claims 1, 38, 40 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by the Abstract to Fujita et al., JP 05-297198 (10/93).

Fujita et al. disclose a powder biocidal composition comprising a zinc pyridithione salt derivative (e.g. zinc 2-pyridine-thiol 1-oxide salt) alone or combined with zinc oxide. The particle complex which possesses ingredients within the scope of the presently claimed would inherently possess the same physical parameters.

Discussion

Applicant argues that Fujita et al. Discloses "physical mixtures" and not "composite particles" as presently claimed. The Examiner respectfully disagrees.

Fujita clearly discloses a powder coating of components which are clearly within the presently claimed scope. The formation of a "powder coating" is clearly within the scope of the presently claimed "composite particles".

Accordingly this rejection is hereby maintained.

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New Objection(s) and/or Rejection(s)

Claim Objections

7. Claim 40 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In new claim 40 the recitation of the core comprising "a zinc containing compound selected from zinc oxide and zinc selenide" further broadens the claim 1 markush core since the claim 1 markush can only include zinc.

Claim Rejections - 35 USC § 102

8. Claims 1, 38, 40 and 41 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Morris et al., U.S. Pat. No. 5,916,947 (6/99: filed 9/96 or earlier) .

Morris et al. disclose a biocidal composition comprising zinc pyrithione powder (e.g. see col. 7, lines 4-10 and col. 8, lines 29-31 which meet the "composite particle" definition e.g. powder comprises particles; and zinc pyrithione is clearly the reaction product of zinc and pyrithione. The Morris et al. particle complex which possesses ingredients within the scope of the presently claimed would inherently possess the same physical parameters as presently claimed (e.g. core/shell structure.

Additionally, Morris et al. further discloses a biocidal particle composition (e.g. see col. 1, lines 10-20) that comprises a zinc core (e.g. zinc oxide) and a zinc pyrithione "shell" (e.g. see Example 1 and patent claims 1-17. The presence of ingredients as "composite particles" in the

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same presently claimed physical relationship (e.g. core/shell) would inherently result in the presently claimed "reaction product" of the pyrrhione with a "portion" of the core metal (e.g. zinc/zinc oxide). Alternatively the referenc explicitly teaches that zinc pyrrhione acts as a "photosensitizer" which photosensitizes the core zinc metal. This photosensitizing effect would result in a "reaction product" within the scope of the presently claimed invention. .

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9. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) and applicant's submission of an amendment prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i); § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

NOTE: the present location of this applicatin is ART UNIT 1627.

General information regarding further correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Celsa whose telephone number is (703) 305-7556.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Adams (art unit 1627), can be reached at (703)308-0570.

Any inquiry of a general nature, or relating to the status of this application, should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Bennett Celsa (art unit 1627)

March 3, 2000